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EXAMINER	
SYED, FARHAN M	

ART UNIT	PAPER NUMBER
2165	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/728,686	CARR ET AL.	
	Examiner	Art Unit	
	Farhan M. Syed	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-34 are pending.

Election/Restrictions

2. In the Remarks filed by the Applicant on 27 July 2006, the Applicant amended the non-elected claims (Groups II-IV) to be dependent upon the elected independent claims in Group I (Claims 1-5, 10-15, and 33). The Examiner withdraws the restriction filed on 31 May 2006.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 10, item 1008. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 22-28 and 30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim s 22-28 and 30-32 recites the limitation "the apparatus" in line 1 of each claim. There is insufficient antecedent basis for this limitation in the claim.

7. The term "struct" in claim 19, line 1 is a relative term that renders the claim indefinite. The term "struct" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. For further prosecution of this claim, the Examiner will assume the Applicant meant structure.

Claim Rejections - 35 USC § 101

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-3, 5-17, 19, 21-34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims do not identify a

practical application that produces a useful, tangible and concrete result using the claimed methodology. Rubber-Tip Pencil Co. v. Howard, 87 U.S. (20 Wall.) 498, 507 (1874) The USPTO published the "Interim Guidelines for Examination of Patent Applications for Subject Matter Eligibility" on 26 October 2005 and posted such guidelines to the www.uspto.gov website that are used in examination of this application.

A useful result of an invention must manifest the features of specificity, substantialness, and creditability. The instant application lacks specificity as noted by example in reference to the following claims:

Claims 1 and 12, Offer manager not defined.

Claim 1, user-defined aggregates not defined.

Claim 1, entity data not defined.

Claim 1, context object not defined.

Claim 3, record collection not defined.

Claim 5, case set not defined

Claim 6, detailed in-memory data not defined.

Claim 8, entity-related data not defined.

Claims 9 and 29-32, compound aggregate not defined.

Claim 10, custom recommender not defined.

Claim 10 stub not defined.

Claim 11 pre-defined business model not defined.

Claim 13, meta-data categories not defined.

Claim 14, distinct class not defined.

Claims 14, 15, and 33, skeletons not defined.

Claims 16 and 34, simple aggregates not defined.

Claim 19, pre-computed historical aggregates not defined.

Claim 23, primitive data type not defined.

Claim 25, relational operator not defined.

Claim 26, positive and negative relative not defined.

Claim 27, function page not defined.

Claim 28, user-written class not defined.

A tangible result must not exhibit abstractness. The instant application has abstract results as noted by example in reference to the following claims:

Claim 1, entered configuration information

Claim 2, capable of computing aggregates in real-time from in-memory

Claim 5 and 21, write a custom static method

Claim 7, performing aggregation.

Claim 10, using a user interface that reflects upon Java classes

Claim 11, makes offer contingent on resulting scores.

Claim 13, capable of reloading and compiling.

Claim 16, selecting a record set, ...selecting an element, ... selecting an aggregation.

Claim 17, a condition capable of being autonomously.

Claim 19, record containing pre-computed historical aggregates.

Claim 26, returns a number relative to an origin.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 15, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Medicke et al (U.S. Patent 7,085,762 and known hereinafter as Medicke).

As per claim 1, Medicke teaches a recommender for usage in a data mining system comprising (i.e. "The model engine 314 may, for example, be a data mining and/or scoring engine that may score, rank and/or classify data records. For example, the model engine 314 may be DB2 Intelligent Mining Scoring Engine from International Business Machines, Armonk, N.Y.")(Column 6, lines 34-39): a scoring engine capable of scoring information using at least one data mining model that derives scores from aggregated data (i.e. "Analytical models, such as predictive analytical models are conventionally used to analyze data in a data warehouse. Scoring of records against a predictive model, for example, may be provided by a scoring engine.")(Column 1, lines 31-34); an offer manager capable of mapping scores to offers based on entered

configuration information (i.e. "In particular, the Store Procedure provided with DB2 Intelligent Mining Scoring may be used to import the model into its corresponding model table.")(Column 6, lines 35-37); an aggregation engine that computes user-defined aggregates dynamically for real-time scoring by the scoring engine (i.e. "An e-Utility approach to analytic models may facilitate integrated real-time analytics where models can be invoked real-time from, for example, operational WebSphere applications and business processes." "An invocation statement, such as an apply SQL statement, is also generated and incorporated in the Java bean that will invoke the model and apply the set of data to a model to score/rank/classify the set of data and retrieve the results (block 706).")(Column 11, lines 11-14; Column 10, lines 4-8); a user interface that exposes entity data through a user-written Interface Device Language (IDL), the IDL defining a context object containing the input data including record-sets, singular records, and scalar elements (i.e. "Furthermore, the analytical model may be a predictive model markup language (PMML) model. Invoking the analytical model may be provided by creating a set of tables utilized to store model information and parsing a PMML modeling language representation of the analytical model to populate the set of tables.")(Abstract); and at least one aggregate wizard that defines aggregates and reflects on the user interface (i.e. "In additional embodiments of the present invention, parsing the PMML modeling language representation of the analytical model to populate the set of tables includes extracting information from the PMML modeling language representation to populate the model table and the mining input constraints table. The information may be extracted by parsing elements with a model tag to extract the model type and storing the model type in the model type field of the model table and parsing the element with the model tag to extract attributes and storing the attributes in the attributes field of the model table. Extraction of the information may also include aggregating values from a value attribute to store a list of candidates if an optype is categorical and parsing a field for minimum and maximum values if an optype of a value attribute is continuous.")(Column 2, lines 38-55).

As per claims 15 and 33, Medicke teaches an information handling method comprising: populating a recommender context with data cached for an entity transaction session (i.e. " In still other embodiments of the present invention, a system for accessing an analytic model is provided that includes a predictive model markup language (PMML) interrogator configured to parse a PMML file associated with the analytical model and populate tables with information about the analytical model. A bean creator is configured to generate a Java bean to wrap an invocation statement, such as a SQL statement, that invokes the analytical model based on the populated tables. A bean to web services circuit is configured to transform the Java bean to a web services document so as to allow the analytical model to be invoked by a web services interface.")(Column 2, lines 56-67); compiling a customized interface definition language file to generate stubs and skeletons (i.e. " In still other embodiments of the present invention, a system for accessing an analytic model is provided that includes a predictive model markup language (PMML) interrogator configured to parse a PMML file associated with the analytical model and populate tables with information about the analytical model. A bean creator is configured to generate a Java bean to wrap an invocation statement, such as a SQL statement, that invokes the analytical model based on the populated tables. A bean to web services circuit is configured to transform the Java bean to a web services document so as to allow the analytical model to be invoked by a web services interface.")(Column 2, lines 56-67); generating a distinct class for each structure or record-set including each record-set as an array of objects (i.e. " In still other embodiments of the present invention, a system for accessing an analytic model is provided that includes a predictive model markup language (PMML) interrogator configured to parse a PMML file associated with the analytical model and populate tables with information about the analytical model. A bean creator is configured to generate a Java bean to wrap an invocation statement, such as a SQL statement, that invokes the analytical model based on the populated tables. A bean to web services circuit is configured to transform the Java bean to a web services document so as to allow

the analytical model to be invoked by a web services interface.")(Column 2, lines 56-67); dynamically loading a skeleton to create a custom server (i.e. "In still other embodiments of the present invention, a system for accessing an analytic model is provided that includes a predictive model markup language (PMML) interrogator configured to parse a PMML file associated with the analytical model and populate tables with information about the analytical model. A bean creator is configured to generate a Java bean to wrap an invocation statement, such as a SQL statement, that invokes the analytical model based on the populated tables. A bean to web services circuit is configured to transform the Java bean to a web services document so as to allow the analytical model to be invoked by a web services interface.")(Column 2, lines 56-67); defining aggregates using a wizard that reflects upon classes generated from an interface to identify available records and attributes (i.e. " In still other embodiments of the present invention, a system for accessing an analytic model is provided that includes a predictive model markup language (PMML) interrogator configured to parse a PMML file associated with the analytical model and populate tables with information about the analytical model. A bean creator is configured to generate a Java bean to wrap an invocation statement, such as a SQL statement, that invokes the analytical model based on the populated tables. A bean to web services circuit is configured to transform the Java bean to a web services document so as to allow the analytical model to be invoked by a web services interface.")(Column 2, lines 56-67); and computing aggregates from data cached in memory (i.e. "The memory 136 is representative of the overall hierarchy of memory devices containing the software and data used to implement the functionality of the data processing system 130. The memory 136 can include, but is not limited to, the following types of devices: cache, ROM, PROM, EPROM, EEPROM, flash memory, SRAM, and DRAM.")(Column 5, lines 31-37).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Zargham et al (U.S. Patent Publication 2002/0107957 and known hereinafter as Zargham).

As per claim 10, Zargham teaches a real-time information handling apparatus comprising (i.e. ""FIG. 12a also illustrates how the interaction manager and rules engine can cooperate to produce a prompt or response in connection with a particular type of business.) (Paragraph [0032]): an interaction manager that populates a recommender context with data cached for an entity transaction session (i.e. " As shown in FIG. 13a, the interaction manager application 131 (by Compaq Computer Corporation) leverages the rules engine 121 within the ZLE core to define complex rules governing customer interactions across multiple channels. The Interaction manager also adds a real-time capability for inserting and tracking each customer transaction as it occurs so that relevant values and more can be offered to consumers based on real-time information.")(Page 10, paragraph [0123]); a recommender that receives the recommender context, the recommender further comprising: at least one recommender driver and/or utility (i.e. "Access to the central dynamic real-time data warehouse and database management is correspondingly available to the enterprise applications. A real time coherent view of the information is available to the enterprise applications from across the enterprise through the central dynamic real-time data warehouse and database management. The ZLE services are coupled with the central dynamic real-time data warehouse and database management and are operatively connected with the enterprise applications. The transaction processing and monitoring is relative to the central real-time data warehouse and database management so that the business transactions can be conducted across the enterprise with reduced

latencies. The transaction processing and monitoring at the ZLE core is implemented in a server environment that includes a server or a server cluster.")(Paragraph [0016]); a custom recommender server that is configured via the at least one recommender driver and/or utility dynamically loading a stub (i.e. "Using database extractors, database loaders and application adapters technologies, the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS), and synchronize information across the enterprise using enterprise applications integration (EAI) tools.")(Paragraph [0012]); and an aggregation engine defined using a graphical user interface wizard that reflects upon Java classes generated from the graphical user interface to identify available records and attributes (i.e. " In this embodiment, at the core of the ZLE framework resides a set of ZLE service--i.e., core services and capabilities--as shown in FIGS. 10 and 11. The core services 202 include native services and core ISV services (ISVs are third-party enterprise software vendors). The ZLE services (121-126) are preferably built around Tuxedo 206, CORBA 208 or Java technologies (CORBA stands for common object request broker architecture)." "The rules service (See, e.g., 121 FIG. 10 and FIG. 13) enables writing business rules using graphical user interface or syntax like a declarative, English-language sentence.")(Paragraph [0082], [0105]).

As per claims 11, Zargham teaches the apparatus wherein the recommender further comprises: a scoring engine capable of computing scores for at least one predefined business model and to make offers contingent on resulting scores (i.e. "The feedback mechanism provides an automatic feedback of results, produced from the data mining and analysis, to the business transaction paths. The invention further contemplates the ZLE architecture, a multilevel architecture that supports the ZLE framework." "Using database extractors, database loaders and application adapters technologies, the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS), and synchronize

information across the enterprise using enterprise applications integration (EAI) tools.")(Paragraphs [0036] and [0012]).

As per claims 12, Zargham teaches the apparatus wherein the recommender further comprises: an offer manager capable of using criteria entered into a table to select offers based on scores from at least one data mining model (i.e. "The Interaction manager also adds a real-time capability for inserting and tracking each customer transaction as it occurs so that relevant values and more can be offered to consumers based on real-time information.")(Paragraph [0123]).

As per claims 13, Zargham teaches the apparatus wherein the recommender further comprises: an interface capable of reloading and compiling a combination of metadata categories in real-time including aggregate definition models, deployed data mining models, business rules, and offer definitions (i.e. "Using database extractors, database loaders and application adapters technologies, the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS), and synchronize information across the enterprise using enterprise applications integration (EAI) tools.")(Paragraph [0012]).

As per claims 14, Zargham teaches the apparatus wherein: the recommender context comprises stubs and skeletons, and structures and/or record-sets, a distinct class being generated for each structure or record set, the class representing the recommender context (i.e. "Using database extractors, database loaders and application adapters technologies, the ZLE can integrate data related to the real time operations of the enterprise into a data storage cache, also known as operational data store (ODS), and synchronize information across the

enterprise using enterprise applications integration (EAI) tools.")(Paragraph [0012]).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medicke et al (U.S. Patent No. 7,085,762 and known hereinafter as Medicke) in view of Zargham et al (U.S. Patent Pub. 2002/0107957 and known hereinafter as Zargham).

As per claim 2, Medicke does not explicitly teach the recommender wherein: the aggregation engine is capable of computing aggregates in real-time from in-memory data that is dynamically cached during a session with an entity.

Zaghram teaches the recommender wherein: the aggregation engine is capable of computing aggregates in real-time from in-memory data that is dynamically cached during a session with an entity (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the recommender wherein: the aggregation engine is capable of computing aggregates in real-time from in-memory data that is dynamically cached during a session with an entity with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 3, Medicke does not explicitly teach the recommender further comprising: an aggregation wizard that enables a user to select a record collection in the in-memory data, select an element of the record collection as a value to be aggregated, select an aggregate function, select a condition to apply, and aggregate by applying the selected condition

Zaghram teaches the recommender further comprising: an aggregation wizard that enables a user to select a record collection in the in-memory data, select an element of the record collection as a value to be aggregated, select an aggregate function, select a condition to apply, and aggregate by applying the selected condition (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the

aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include teaches the recommender further comprising: an aggregation wizard that enables a user to select a record collection in the in-memory data, select an element of the record collection as a value to be aggregated, select an aggregate function, select a condition to apply, and aggregate by applying the selected condition with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 4, Medicke does not explicitly teach the recommender further comprising: an aggregation wizard that enables a user to select an element upon which the condition is based, select an operator, and select a value for comparison.

Zaghram teaches the recommender further comprising: an aggregation wizard that enables a user to select an element upon which the condition is based, select an operator, and select a value for comparison (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the recommender further comprising: an aggregation wizard that enables a user to select an element upon which the condition is based, select an operator, and select a value for comparison with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 5, Medicke does not explicitly teach the recommender further comprising: an aggregation wizard that enables a user to write a custom static method to compute derived attributes.

Zaghram teaches the recommender further comprising: an aggregation wizard that enables a user to write a custom static method to compute derived attributes (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the recommender further comprising: an aggregation wizard that enables a

user to write a custom static method to compute derived attributes with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 6, Medicke does not explicitly teach the recommender, said aggregation engine further comprising: a method of constructing aggregates for a case set; a method of computing aggregates from detailed in-memory data that is dynamically cached; and a method of iteratively mining data during an entity transaction to define new aggregates and refine existing aggregates based on entity responses, the aggregates being defined and refined using a wizard.

Zargham teaches the recommender, said aggregation engine further comprising: a method of constructing aggregates for a case set; a method of computing aggregates from detailed in-memory data that is dynamically cached; and a method of iteratively mining data during an entity transaction to define new aggregates and refine existing aggregates based on entity responses, the aggregates being defined and refined using a wizard (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the recommender, said aggregation engine further comprising: a method of constructing aggregates for a case set; a method of computing aggregates from detailed in-memory data that is dynamically cached; and a method of iteratively mining data during an entity transaction to define new aggregates and refine existing aggregates based on entity responses, the aggregates being defined and refined using a wizard with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 7, Medicke teaches the aggregation engine further comprising: a method of performing aggregation for real-time scoring (i.e. "Scoring of records against a predictive model, for example, may be provided by a scoring engine. Such application of a predictive model to a database record may be provided, for example, through the use of a Predictive Model Markup Language (PMML) file that defines the application of a model to data. However, invocation of these PMML files is typically platform and/or system dependent such that the necessary operations to invoke a predictive model in one platform and/or system may not function to invoke the predictive model in a different platform and/or system. Thus, models and/or PMML files may be platform and/or system specific, which may reduce the ability to provide best-practices models that may be deployed across different platforms and/or systems.")(Column 1, lines 30-46).

As per claim 8, Medicke does not explicitly teach the aggregation engine further comprising: a method of drawing aggregates from different tables in a memory containing entity-related data.

Zargham teaches the aggregation engine further comprising: a method of drawing aggregates from different tables in a memory containing entity-related data (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the aggregation engine further comprising: a method of drawing aggregates from different tables in a memory containing entity-related data with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 9, Medicke does not explicitly teach the aggregation engine further comprising: a method of computing a compound aggregate from at least one other aggregate.

Zargham teaches the aggregation engine further comprising: a method of computing a compound aggregate from at least one other aggregate (i.e. "The ZLE framework is additionally formed with dynamic central repository configured for real-time loads, extractions, updates and queries. The dynamic central repository aggregates information related, in real time, to the plurality of events where a real-time access to the dynamic central repository is correspondingly available for the enterprise applications. Hence, a real time coherent view of the aggregated information is available to the enterprise applications from across the enterprise via the dynamic central repository.")(Paragraph [0013]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Zargham to include the aggregation engine further comprising: a method of computing a compound aggregate from at least one other aggregate with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

7. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Medicke et al (U.S. Patent No. 7,085,762 and known hereinafter as Medicke) in view of Heytens et al (U.S. Patent Pub. 2003/0220860 and known hereinafter as Heytens).

As per claims 16 and 34, Medicke does not explicitly teach the method further comprising: creating simple aggregates using a simple aggregate wizard comprising: selecting a record-set to be aggregated from a list populated with all objects in a context

class; selecting an element for aggregation from a list populated with fields of an object of the context class objects; and selecting an aggregation function from a list populated with known aggregate functions applicable to a data-type of a field of the object fields.

Heytens teaches the method further comprising: creating simple aggregates using a simple aggregate wizard comprising: selecting a record-set to be aggregated from a list populated with all objects in a context class; selecting an element for aggregation from a list populated with fields of an object of the context class objects; and selecting an aggregation function from a list populated with known aggregate functions applicable to a data-type of a field of the object fields (i.e. "The dynamic data caching function aggregates, caches and allows real-time access to real-time state data, event data and lookup data from across the enterprise. Thus, for example, this function obviates the need for contacting individual information sources or production systems throughout the enterprise in order to obtain this information. As a result, this function greatly enhances the performance of the ZLE framework.")(Paragraph [0063]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the method further comprising: creating simple aggregates using a simple aggregate wizard comprising: selecting a record-set to be aggregated from a list populated with all objects in a context class; selecting an element for aggregation from a list populated with fields of an object of the context class objects; and selecting an aggregation function from a list populated with known aggregate functions applicable to a data-type of a field of the object fields with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow

invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 17, Medicke does not explicitly teach the method further comprising: selecting zero or more conditions for the aggregate, a condition capable of being autonomously selected based on the element selection.

Heytens teaches the method further comprising: selecting zero or more conditions for the aggregate, a condition capable of being autonomously selected based on the element selection (i.e. "The dynamic data caching function aggregates, caches and allows real-time access to real-time state data, event data and lookup data from across the enterprise. Thus, for example, this function obviates the need for contacting individual information sources or production systems throughout the enterprise in order to obtain this information. As a result, this function greatly enhances the performance of the ZLE framework.")(Paragraph [0063]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the method further comprising: selecting zero or more conditions for the aggregate, a condition capable of being autonomously selected based on the element selection with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 18, Medicke does not explicitly teach the method wherein: the aggregation functions include at least one function selected from among a group consisting of count, sum, min, max, mean, count-distinct, and, or, first, and last, the functions including arithmetic functions and Boolean functions.

Heytens teaches the method wherein: the aggregation functions include at least one function selected from among a group consisting of count, sum, min, max, mean, count-distinct, and, or, first, and last, the functions including arithmetic functions and Boolean functions (i.e. "ConditionName (varchar)--name of condition (Boolean element or custom function) for selecting structure instances to use when computing input variable values.")(Paragraph [0188]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the method wherein: the aggregation functions include at least one function selected from among a group consisting of count, sum, min, max, mean, count-distinct, and, or, first, and last, the functions including arithmetic functions and Boolean functions with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 19, Medicke does not explicitly teach the method further comprising: defining a context to include a structure to designate a unique record or a record containing pre-computed historical aggregates.

Heytens teaches the method further comprising: defining a context to include a structure to designate a unique record or a record containing pre-computed historical aggregates (i.e. "The dynamic data caching function aggregates, caches and allows real-time access to real-time state data, event data and lookup data from across the enterprise. Thus, for example, this function obviates the need for contacting individual information sources or production systems throughout the enterprise in order to obtain this information. As a result, this function greatly enhances the performance of the ZLE framework." "Then, subsequent interactions and additional data can be retrieved and analyzed in combination with the historical data to refresh or reformulate the models over and over again during succeeding analytic learning cycles. Each time models are refreshed they are once again deployed into the operational environment of the ZLE framework at the core of which resides the ODS.")(Paragraph [0063], [0203]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the method further comprising: defining a context to include a structure to designate a unique record or a record containing pre-computed historical aggregates with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 20, Medicke does not explicitly teach the method further comprising: aggregating an element that is a column of a record in a first case; and aggregating an element by deriving an attribute from operations on a plurality of at least one column of the record in a second case.

Heytens teaches the method further comprising: aggregating an element that is a column of a record in a first case; and aggregating an element by deriving an attribute from operations on a plurality of at least one column of the record in a second case (i.e. "the analytic learning cycle is associated with taking and profiling data gathered in the ODS 106, transforming the data into modeling case sets 404, transferring the model case sets, building models 408 and deploying the models into model tables 410 in the ODS. As further shown, the scoring engine 121 reads the model tables 410 in the ODS and executes the models, as well as interfaces with other ZLE applications (such as the IM) that need to use the models in response to various events." "The modeling case set formed in the ODS is preferably transferred in bulk out of the ODS to a data mining server (e.g., 114, FIG. 4a) via multiple concurrent streams. The efficient transfer of case sets from the ODS to the data mining server is performed via another tool that provides an intuitive and graphical interface for identifying a source table, target files and formats, and various other transfer options (FIG. 4e). Transfer options include, for example, the number of parallel streams to be used in the transfer. Each stream transfers a separate horizontal partition (row) of the table or a set of logically contiguous partitions. The transferred data is written either to fixed-width/delimited ASCII files or to files in the native format of the data mining tool used for building the models. The transferred data is not written to temporary disk files, and it is not placed on disk again until it is written to the destination files.")(Paragraphs [0075] and [0085]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the method further comprising: aggregating an element that is a column of a record in a first case; and aggregating an element by deriving an attribute from operations on a plurality of at least one column of the record in a second case with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-

67).

As per claim 21, Medicke does not explicitly teach teaches the recommender further comprising: an aggregation wizard further comprising: a first list populated by elements of structure and by a derived method that takes class of the structure as a parameter, the first list alternatively listing items including: a first item type of static methods that can be written by an entity to compute a derived attribute of a record, and a second item type of a class that matches class of a static method parameter; and a second list populated by types of elements, the second list being operative for the second item type and capable of listing static methods capable of attribute form conversions.

Heytens teaches the recommender further comprising: an aggregation wizard further comprising: a first list populated by elements of structure and by a derived method that takes class of the structure as a parameter, the first list alternatively listing items including: a first item type of static methods that can be written by an entity to compute a derived attribute of a record, and a second item type of a class that matches class of a static method parameter; and a second list populated by types of elements, the second list being operative for the second item type and capable of listing static methods capable of attribute form conversions (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise applications and further provides enterprise application interface which is configured for integrating the applications

and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data.")(Paragraph [0014]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender further comprising: an aggregation wizard further comprising: a first list populated by elements of structure and by a derived method that takes class of the structure as a parameter, the first list alternatively listing items including: a first item type of static methods that can be written by an entity to compute a derived attribute of a record, and a second item type of a class that matches class of a static method parameter; and a second list populated by types of elements, the second list being operative for the second item type and capable of listing static methods capable of attribute form conversions with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 22, Medicke does not explicitly teach the recommender wherein: attribute form conversions are selected from among a group comprising a parse, an extraction, a mathematic operation, and a Boolean operation.

Heytens teaches the recommender wherein: attribute form conversions are selected from among a group comprising a parse, an extraction, a mathematic operation, and a Boolean operation (i.e. "Fundamentally, data mining is a highly iterative, non-

sequential bottoms-up data-driven analysis that uses mathematical algorithms to find patterns in the data.")(Paragraph [0076]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: attribute form conversions are selected from among a group comprising a parse, an extraction, a mathematic operation, and a Boolean operation with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 23, Medicke does not explicitly the recommender wherein: for the second item type, the second list is populated upon selection of a conversion method with a new set of conversions relevant to a data type returned by the most recent conversion method selected, the data types being selected from among a group comprising a primitive data type, a string, a standard class, or an entity-written class.

Heytens teaches the recommender wherein: for the second item type, the second list is populated upon selection of a conversion method with a new set of conversions relevant to a data type returned by the most recent conversion method selected, the data types being selected from among a group comprising a primitive data type, a string, a standard class, or an entity-written class (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise

applications and further provides enterprise application interface which is configured for integrating the applications and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data.")(Paragraph [0014]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: for the second item type, the second list is populated upon selection of a conversion method with a new set of conversions relevant to a data type returned by the most recent conversion method selected, the data types being selected from among a group comprising a primitive data type, a string, a standard class, or an entity-written class with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 24, Medicke does not explicitly teach the recommender wherein: for conversion to a class type, the second list displays applicable static methods, public fields, and derived fields.

Heytens teaches the recommender wherein: for conversion to a class type, the second list displays applicable static methods, public fields, and derived fields (i.e. "A successful analytic learning cycle for fraud detection requires the creation of a modeling data set with carefully chosen variables and derived variables for data-mining. The modeling data set is also referred to as a case set.")(Paragraph [0115]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: for conversion to a class type, the second list displays applicable static methods, public fields, and derived fields with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 25, Medicke does not explicitly teach the recommender further comprising: a relational operator static method for which the aggregation wizard: parses a string parameter and returns an object of a relational operator class; operative when the second list includes a relational operator, displaying fields and get-methods of the relational operator class; and extracting a corresponding value for comparing against the relational operator.

Heytens teaches the recommender further comprising: a relational operator static method for which the aggregation wizard: parses a string parameter and returns an object of a relational operator class; operative when the second list includes a relational operator, displaying fields and get-methods of the relational operator class; and extracting a corresponding value for comparing against the relational operator (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise applications and further provides enterprise application interface which is configured

for integrating the applications and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data.")(Paragraph [0014]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender further comprising: a relational operator static method for which the aggregation wizard: parses a string parameter and returns an object of a relational operator class; operative when the second list includes a relational operator, displaying fields and get-methods of the relational operator class; and extracting a corresponding value for comparing against the relational operator with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 26, Medicke does not explicitly teach the recommender further comprising: a relative element static method for which the aggregation wizard: receives a relational element parameter and returns a number relative to an origin, designated as positive and negative relative to the origin.

Heytens teaches the recommender further comprising: a relative element static method for which the aggregation wizard: receives a relational element parameter and returns a number relative to an origin, designated as positive and negative relative to the origin (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise applications and further provides enterprise application

interface which is configured for integrating the applications and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data." "The data mining tools and algorithms are used to build predictive models (e.g. 502, 504) from transferred case sets 508 and to assess model quality characteristics such as robustness, predictive accuracy, and false positive/negative rates (element 506).")(Paragraphs [0014] and [0085]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender further comprising: a relative element static method for which the aggregation wizard: receives a relational element parameter and returns a number relative to an origin, designated as positive and negative relative to the origin with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 27, Medicke does not explicitly teach the recommender wherein: the function page enables the user can enter a name of a custom aggregate.

Heytens teaches the recommender wherein: the function page enables the user can enter a name of a custom aggregate (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise applications and further provides enterprise application interface which is configured for integrating the applications and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data.")(Paragraph [0014]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: the function page enables the user can enter a name of a custom aggregate with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 28, Medicke does not explicitly teach the recommender wherein: the aggregation wizard dynamically loads and verifies a user-written class for each known data type.

Heytens teaches the recommender wherein: the aggregation wizard dynamically loads and verifies a user-written class for each known data type (i.e. "Such system invariably includes some form of the central repository (e.g., the ODS) at which the real-time data is aggregated from across the enterprise and is available in real-time. The system provides a platform for running enterprise applications and further provides enterprise application interface which is configured for integrating the applications and real-time data and is backed by the central repository so as to provide a coherent, real-time view of enterprise operations and data.")(Paragraph [0014]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: the aggregation wizard dynamically loads and verifies a user-written class for each known data type with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow

invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 29, Medicke does not explicitly teach the recommender further comprising: a compound aggregation wizard further comprising: a function selection page that enables a user to select a compound aggregate function from a list, the function determining component aggregate number and types; a component page that enables the user to sequentially select at least one component aggregate from a list populated with all currently defined aggregates of an applicable type; and a compute method that computes the compound aggregate from the component aggregates.

Heytens teaches the recommender further comprising: a compound aggregation wizard further comprising: a function selection page that enables a user to select a compound aggregate function from a list, the function determining component aggregate number and types; a component page that enables the user to sequentially select at least one component aggregate from a list populated with all currently defined aggregates of an applicable type; and a compute method that computes the compound aggregate from the component aggregates (i.e. "The dynamic data caching function aggregates, caches and allows real-time access to real-time state data, event data and lookup data from across the enterprise. Thus, for example, this function obviates the need for contacting individual information sources or production systems throughout the enterprise in order to obtain this information. As a result, this function greatly enhances the performance of the ZLE framework." "Then, subsequent interactions and additional data can be retrieved and analyzed in combination with the historical data to refresh or reformulate the models over and over again during succeeding analytic learning cycles. Each time

models are refreshed they are once again deployed into the operational environment of the ZLE framework at the core of which resides the ODS.")(Paragraph [0063], [0203]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender further comprising: a compound aggregation wizard further comprising: a function selection page that enables a user to select a compound aggregate function from a list, the function determining component aggregate number and types; a component page that enables the user to sequentially select at least one component aggregate from a list populated with all currently defined aggregates of an applicable type; and a compute method that computes the compound aggregate from the component aggregates with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 30, Medicke does not explicitly teach the recommender wherein: the component page displays a finish button that enables a user to complete selection of the component aggregates, the number of component aggregates for a particular compound aggregate being fixed for some aggregates and variable for some aggregates.

Heytens teaches the recommender wherein: the component page displays a finish button that enables a user to complete selection of the component aggregates, the number of component aggregates for a particular compound aggregate being fixed

for some aggregates and variable for some aggregates (i.e. "The dynamic data caching function aggregates, caches and allows real-time access to real-time state data, event data and lookup data from across the enterprise. Thus, for example, this function obviates the need for contacting individual information sources or production systems throughout the enterprise in order to obtain this information. As a result, this function greatly enhances the performance of the ZLE framework." "Then, subsequent interactions and additional data can be retrieved and analyzed in combination with the historical data to refresh or reformulate the models over and over again during succeeding analytic learning cycles. Each time models are refreshed they are once again deployed into the operational environment of the ZLE framework at the core of which resides the ODS.")(Paragraph [0063], [0203]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: the component page displays a finish button that enables a user to complete selection of the component aggregates, the number of component aggregates for a particular compound aggregate being fixed for some aggregates and variable for some aggregates with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 31, Medicke does not explicitly teach the recommender wherein: the function page enables the user to define a name of a custom compound aggregate class.

Heytens teaches the recommender wherein: the function page enables the user to define a name of a custom compound aggregate class (i.e. "ConditionName (varchar)--

name of condition (Boolean element or custom function) for selecting structure instances to use when computing input variable values.")(Paragraph [0188]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: the function page enables the user to define a name of a custom compound aggregate class with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

As per claim 32, Medicke does not explicitly teach the recommender wherein: the compound aggregation wizard dereferences fields and methods, performs conversions, and selects applicable rows of a data array.

Heytens teaches the recommender wherein: the compound aggregation wizard dereferences fields and methods, performs conversions, and selects applicable rows of a data array (i.e. "Sequence numbers start at 0. For example, a PMML description for a model that is 10,000 long could be stored in three rows, the first one with a sequence number of 0, the second 1, and the third 2. Approximately the first 4000 bytes of the PMML description would be stored in the first row, the next 4000 bytes in the second row, and the last 2000 bytes in the third row.")(Paragraph 0178]).

It would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Medicke with the teachings of Heytens to include the recommender wherein: the compound aggregation wizard dereferences fields and methods, performs conversions, and selects applicable rows of a data array

with the motivation to access an analytical model by providing web services abstraction of analytical model so as to allow invocation of the analytical model hosted by an analytical engine through a web services interface to an analytic engine. (Medicke, column 1, lines 64-67).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farhan M. Syed whose telephone number is 571-272-7191. The examiner can normally be reached on 8:30AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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